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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN F. GASS, J. DAVID FULMER, JOEL F. JENSEN,
BENJAMIN B. SCHRAMM and ROBERT L. CHAMBERLAIN

Appeal 2008-1064
Application 09/929,237
Technology Center 3700

Decided: February 25, 2009¹

Before WILLIAM F. PATE III, JENNIFER D. BAHR, and
LINDA E. HORNER, *Administrative Patent Judges*.

WILLIAM F. PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF CASE

This is an appeal from the final rejection of claims 1-3, 11, 20, 21, 28, 30, 32 and 34. Claims 10, 12-19 and 23-27 have been cancelled. Claims 4-9, 22, 29, 31, 33 and 35 stand withdrawn from consideration.

We have jurisdiction over the appeal pursuant to 35 U.S.C. §§ 6 and 134.

The claimed subject matter relates to a safety system and a self-test system for woodworking machines, particularly saws. The safety system consists of a detection system configured to detect a dangerous condition between a person and the tool and a reaction system for disabling the tool if a dangerous condition is detected. The self-test system comprises a control system to determine the operability of the reaction system without having to operate the reaction system.

Claim 1, reproduced below, is further illustrative of the claimed subject matter.

1. A woodworking machine comprising:
 - a cutting tool for cutting workpieces;
 - a motor configured to drive the cutting tool;
 - a detection system configured to detect a dangerous condition between a person and the cutting tool;
 - a reaction system controllable to disable the cutting tool if the dangerous condition is detected; and
 - a control system configured to determine the operability of the reaction system without having to operate the reaction system and to disable the motor if the reaction system is inoperable.

REFERENCES

The references of record relied upon by the Examiner as evidence of obviousness are:

Mowery, Jr.	US 2,785,710	Mar. 19, 1957
Kobayashi	US 3,716,113	Feb. 13, 1973 ²
Balban	US 3,863,208	Jan. 28, 1975
Yoneda	US 4,117,752	Oct. 03, 1978
Doherty	US 6,325,195 B1	Dec. 04, 2001
Razzano	US 6,564,909 B1	May 20, 2003

REJECTIONS

Claims 20 and 34 stand rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view of Mowery and further in view of Razzano.

Claims 1, 11, 21, 28, 30 and 32 stand rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view Mowery and further in view of Razzano and Doherty.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view of Mowery, Razzano, Doherty and further in view of Balban.

² Kobayashi is not listed in the statement of any of the rejections. Where a reference is relied on to support a rejection, whether or not in a "minor capacity," there would appear to be no excuse for not positively including the reference in the statement of rejection. *In re Hoch*, 428 F.2d 1341, 1342 n.3 (CCPA 1970).

ISSUE

The issue on appeal relates to whether Appellants have established that the Examiner erred in rejecting the claims on the grounds of obviousness. This issue turns on: a) whether the Razzano reference is available as prior art; b) whether the cited references teach or suggest all of the limitations of the claimed subject matter; and c) whether even if all elements are found in the prior art, the references have been properly combined by the Examiner.

THE STATUS OF THE RAZZANO REFERENCE AS PRIOR ART

Appellants have filed a declaration under 37 C.F.R. § 1.131 by the inventor Stephen F. Gass in order to establish that the Razzano reference is not applicable prior art. The following are Findings of Fact with respect to this issue.

1. In a declaration pursuant to 37 C.F.R. § 1.131, inventor Stephen F. Gass has established that on October 01, 1999, Appellants filed a provisional patent application number 60/157,340 for a Fast Acting Safety Stop.

2. In the declaration, inventor Stephen F. Gass has established that on February 16, 2000, Appellants filed a provisional patent application number 60/182,866 for a Fast-Acting Safety Stop.

3. On page 39 of the 60/182,866 application, a logic control system configured to conduct various safety checks when the system is switched on or off was disclosed. The logic control was depicted in Figure 9

of the application and discussed on pages 39-41 of the specification. The provisional application conveys possession of a logic control system at least to the scope of the subject matter of Figure 9 and pages 39-41 of the specification. Thus this provisional application conveys possession of the subject matter of claims 1, 11, 20, 21, 28, 30, 32 and 34 on appeal.

4. On page 6 of the 60/157,340 application a capacitor adapted to store electrical charge and to trigger the disabling of the cutting tool is disclosed. An exemplary embodiment is disclosed in Figures 2 and 3. On page 10 of the 60/182,866 application a similar capacitor adapted to store electrical charge and to trigger the disabling of the cutting tool is disclosed. Figures 2 and 3 of this application are similar to Figures 2 and 3 of the 60/157,340 application. Since the 60/182,866 application contains disclosure of both the logic control of Fact 3 and the capacitor claimed in claims 2 and 3, the 60/182,866 provisional application conveys possession of the subject matter of claims 2 and 3 on appeal.

5. The Razzano application that matured into US 6,564,909 B1 was filed on May 12, 2000.

ANALYSIS

Non-provisional applications filed under 35 U.S.C. § 111(a) are entitled to the benefit of the filing date of U.S. provisional applications under 35 U.S.C. § 119(e) if the provisions of 35 U.S.C. § 119(e) are provided for. Among the provisions necessary for domestic priority is that the provisional applications satisfy the requirements of 35 U.S.C. § 112, first paragraph. Thus, the disclosure of the provisional applications relied on in

the 37 C.F.R. § 1.131 declaration must provide written description support and an enabling disclosure.

PRINCIPLES OF LAW RE: 35 U.S.C. § 112, FIRST PARAGRAPH

A “patent may only claim priority to an earlier application if the earlier application fulfills the requirements of § 112, first paragraph. In turn, that paragraph requires, in part, that the application ‘shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.’” *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004) (quoting 35 U.S.C. § 112, paragraph 1).

The purpose of the written description requirement is to convey with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). The possession test alone, however, is not always sufficient to meet the written description requirement. *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 969 (Fed. Cir. 2002). Rather, “the written description requirement is satisfied by the patentee’s disclosure of ‘such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention.’” *Id.* (quoting *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997)).

The test for enablement is whether one skilled in the art would have to resort to undue experimentation in order to practice the invention. *In re Angstadt*, 537 F.2d 498, 503 (CCPA 1976). Undue experimentation analysis may include consideration of: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). These factors are illustrative, and what is relevant to an enablement determination depends upon the facts of the particular case. *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 727 F.2d 1200, 1213 (Fed. Cir. 1991).

CONCLUSION RE: BENEFIT

As stated above, it is our finding that the February 16, 2000 provisional application conveyed that the inventors were in possession of the subject matter now claimed in the claims on appeal. With respect to enablement, the Examiner has not discussed the disclosure of the provisional applications in the context of undue experimentation. Thus it is our determination that the Examiner has applied the wrong legal test to deny Appellants' benefit on this ground. Therefore, Appellants' have shown that the Examiner erred in the denial of Appellants' claim for benefit, and it is our conclusion that at least the February 16, 2000 date is an effective benefit date regarding the claimed subject matter on appeal. Inasmuch as this date is before the filing date of the Razzano reference,

Razzano is not applicable prior art with respect to the claimed subject matter on appeal.

FINDINGS OF FACT RE: OBVIOUSNESS

6. Yoneda discloses an emergency system for stopping a band blade of a cutting apparatus. See col. 1, ll. 5-10. Band saw blade 14 is powered by motor 10 which turns pulley 11. When a user comes into contact with the blade, the blade system capacitance changes. This change in capacitance is picked up by conductor pulley 16 and transmitted to amplifier A. See col. 2, ll. 14-41 and col. 3, ll. 14-26. Therefore, Yoneda discloses a detection system and a reaction system for stopping a woodworking machine. However, Yoneda does not disclose a control system configured to determine the operability of the reaction system without having to operate the reaction system itself.

7. Mowery, Jr. discloses an automatic brake for a power tool (saw). The brake pads 27 of Mowery are constantly urged towards the power tool 14 by springs 28. See col. 1, lines 48-53. Thus, to operate the saw, armature shafts 44 must be moved to pivot links 34 and pull plungers 30 against the springs. See col. 1, ll. 61-69. These solenoids are activated by the same circuitry that powers motor 10. See Fig. 2. Thus, Mowery discloses a control system that is interconnected with the motor of the woodworking machine and does not operate independently thereof.

8. Doherty discloses a machine safety guard system. The safety guard system is comprised of protective panels which, when lowered, separate the operator from the dangerous machinery. See col. 3, ll. 3-14.

The panels may have an engagable interlock which comprises a female plug 72 which receives a male plug 74 on the bottom of the panel to complete a circuit to machine motor 80 to allow current to be provided to the motor. See col. 3, l. 62 - col. 4, l. 2. Thus, Doherty discloses a reaction system which can disable a tool motor if a dangerous condition is detected, i.e., the safety shield is in the raised position.

9. Balban discloses a vehicle crash sensor control circuit which indicates a malfunction of the crash sensor or firing circuit on the control panel (dashboard). Balban is disclosed within the context of vehicle air bags. The safety control circuit of Balban is operative to continuously monitor the crash sensor and firing circuit condition during vehicle operation to provide the vehicle operator with a warning in the event the arming switch of the firing circuit is not closed. See col. 1, ll. 5-10 and col. 2, lines 4-13. This warning can be sent without the necessity of a crash occurring. Thus, Balban discloses a control system which is operable to determine the condition of a reaction system without having to operate the reaction system.

10. The Examiner does not include Kobayashi in the statement of any of the rejections on appeal. However, the Examiner appears to rely on Kobayashi in the Answer at 6:5 and 13:5.

11. Kobayashi discloses several embodiments of a braking system with a wear indicator. Taking the embodiment of Figures 1-3 as an example, spring biased stem 39 is constantly urged inwardly (toward the brake disc or to the right in Figures 1-3) by spring 41. See col. 4, ll. 21-44. When wear has occurred, stem 39 will contact inner surface of backing plate 32a and the stem will move leftwardly opening the circuit between metal disk 42 and

backing plate 33. See col. 4, l. 73-col. 5, l. 15. This open circuit is detected by the electrical system depicted in Figure 8, with the open circuit causing a warning light 78 to illuminate on the dashboard. See col. 5, ll. 16-60. Additionally, Kobayashi discloses that while the starter motor circuit is energized, the warning lamp 78 is also illuminated allowing a test of the lamp and lamp circuitry. See col. 5, ll. 60-69.

PRINCIPLES OF LAW RE: OBVIOUSNESS

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, ___, 127 S. Ct. 1727, 1734 (2007) (quoting 35 U.S.C. § 103). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966); see also *KSR Int’l Co.*, 550 U.S. at ___, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”). The scope and content of the prior art includes the explicit and inherent teachings of the prior art. *In re Zurko*, 258 F.3d 1379, 1383-84 (Fed. Cir. 2001) (citing *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995)).

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *KSR Int’l Co.*, 550 U.S. at ___, 127 S. Ct. at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Court pointed out that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss* [*v. Greenwood*], 11 How. 248 [(1851)].” *KSR Int’l Co.*, 550 U.S. at ___, 127 S. Ct. at 1739 (citing *Graham*, 383 U.S. at 12). The Court reiterated that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court also noted that “when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at ___, 127 S. Ct. at 1740 (citing *United States v. Adams*, 383 U.S. 39, 50-51 (1966)). The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

In rejecting claims under 35 U.S.C. § 103(a), the examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the appellant. *Id.* at 1445. *See also Piasecki*, 745 F.2d at 1472. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See Oetiker*, 977 F.2d at 1445; *Piasecki*, 745 F.2d at 1472.

ANALYSIS

We acknowledge that the Examiner's applied references contain bits and pieces including a detection system, a reaction system and a control system. However, we do not find articulated reasoning with rational underpinnings that would support the legal conclusion of obviousness. For example, only Balban actually shows a control system configured to determine the operability of the reaction system without having to operate the reaction system itself. However, it is unclear how the crash sensing control circuitry and the firing circuitry of Balban could be applied to the brake and motor switch disclosed in Yoneda. This combination is more than a simple substitution that would yield a predictable result. To the extent that the Examiner relies on Kobayashi, we acknowledge that Kobayashi teaches a circuit, that when the starter motor is energized, displays an indication that the warning lamp is operable. However, the warning lamp of Kobayashi is merely a fault indicator without a control system function.

On the other hand, while Mowery discloses a brake which is energized by the same circuit that energizes the motor, it teaches little about a control system that is operable to determine the operability of the reaction system without having to operate the reaction system itself. Similarly, Doherty teaches an interlock between the safety system and the motor circuitry. However this fails to suggest a control system operable to sense the operability of the reaction system without having to operate the reaction system itself. Thus, of all the prior art cited by the Examiner, only Balban shows such a control system. Yet, as we have already stated, it is unclear beyond a mere conclusory statement that the inclusion of this feature into Yoneda would have been obvious. Accordingly, we are constrained to reverse the obviousness rejections on appeal.

CONCLUSION

The rejection of claims 20 and 34 as unpatentable over Yoneda in view of Mowery and Razzano are reversed.

The rejection of claims 1, 11, 21, 28, 30 and 32 as unpatentable over Yoneda in view Mowery in view of Razzano and Doherty is reversed.

The rejection of claims 2 and 3 as unpatentable over Yoneda in view of Mowery, Razzano, Doherty and Balban is reversed.

REVERSED

vsh

Appeal 2008-1064
Application 09/929,237

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